

Verification of prenatal indices and indicators in primary health care: a database analysis

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Abstract: Prenatal care is essential for risk reduction, prevention of pathologies and promotion of women's and children's health. The objective of this research was to verify prenatal quality indexes and indicators in the city of Recife/PE. This is a cross-sectional, quantitative, descriptive study with secondary data obtained through the Primary Care Information System (SISAB), an approach on prenatal indices. A total of 24,436 prenatal consultations were recorded from 2019 to 2021 in the municipality of Recife. The year 2019 obtained the highest number of records with 35%. Regarding the frequency of prenatal consultations performed, with 87%. It was possible to notice a considerable reduction in the number of prenatal consultations compared to 2019 to 2021. Thus, we conclude that the participation of a multidisciplinary team contributes to the constant improvement of care planning, involving care for pregnant women.

Keywords: Assistance; Pregnancy; Prenatal care; Prevention

1. Introduction

Prenatal care is of fundamental importance to ensure that the woman and baby have a healthy pregnancy and delivery without any complications. Follow-up, in addition to preventing and early diagnosing diseases and problems that can get worse, also guides women on important topics related to motherhood. The same aims to monitor the pregnant woman, since she will have physiological demands related to pregnancy, such as, for example, blood pressure, weight gain, feeding, the growth of the intrauterine baby, its movement, that is, everything that can happen and bring some aggravation in the gestational period, so it is of great importance, and should be initiated as soon as pregnancy is discovered so that it is possible to perform the minimum number of consultations that the Ministry of Health recommends (BRASIL, 2019).

Prenatal care is essential for risk reduction, prevention of pathologies and promotion of women's and children's health, whose main objective is to identify these probable risks and ensure care with their adequate performance, thus preserving maternal and infant deaths or reducing the threats of their occurrence (GARCIA *et al.*, 2019).

Prenatal care allows the identification of pathologies already present in the body, but which can evolve silently, such as hypertension, diabetes, heart disease, anemia and syphilis. The diagnosis of these pathologies allows indication for adequate treatment thus avoiding greater damage to the woman and the baby. In addition, during examinations and consultations, the health professional will identify whether the fetus has malformation or other issues that require dedication (BRASIL, 2018).

The Ministry of Health (MH) introduced in 2000 the Program of Humanization in Prenatal and Birth (PHPN), thus certifying the decrease in maternal and perinatal deaths and quality and humanized care from childbirth to the puerperium (LIMA *et al.*, 2019). In this program, all pregnant women have the consent of humanized, assured and quality care in pregnancy, childbirth and puerperium according to the established conditions; and, every newborn has the right to humanized and safe neonatal care. For this to occur, gestational and pediatric consultations, laboratory tests, imaging tests, immunization, risk classification and educational activities for pregnant women must be had (CARDOSO *et al.*, 2019).

After eleven years, with the purpose of strengthening and reaffirming this program, the Ministry of Health launched, in 2011, the Rede Cegonha program, which structures and organizes maternal and child health care in Brazil, focusing on the care of childbirth, birth, growth and development of children from 0 to 24 months. It is essential to participate in the Family Health Strategy (ESF) in the implementation process of the Stork Network, because from this strategy the woman is fully monitored during the prenatal and postpartum period (BRASIL, 2019).

In view of the above, it is observed the importance of

working on this theme to improve the quality of services and contribute to health managers in adopting effective measures and strategies in prenatal care. Thus, the present study aims to verify prenatal quality indexes and indicators, bringing benefits both for the pregnant woman and also for the baby.

2. Methodology

This is a comparative, cross-sectional, descriptive and quantitative cohort study, whose data were collected through the secondary database of the Primary Care Information System (SISAB/SUS), provided by DATASUS/Ministry of Health. The population consisted of records in the Prenatal Information System (SISPRENATAL) assisted in primary care in the city of Recife/PE, in the temporal cohort from 2019 to 2021.

Data tabulation in the SISAB was performed by analyzing the variables studied in the prenatal database: region, year of prenatal care, municipality of notification, region of notification, number of tests and number of consultations.

To be the project's enforceability, we had as inclusion criteria: pregnant women who registered with SISPRENATAL, registered in the city of Recife, in 8 Health Regions, low-risk prenatal care throughout the prenatal trajectory. Exclusion criteria were: women who evolved at high risk, who changed their home, not registered in the city of Recife.

For the analysis of these data, the *biostat database* was used, where percentage calculations were used to observe the dispersion among the collected variables, analyzed by simple percentage.

For the theoretical basis, we used the main databases such as PubMed, Literatura Latino-Americana y del Caribe em Ciências de La Salud (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE), Scientific Electronic Library Online (SciELO) and the Portal of the Virtual Health Library (VHL).

It was performed through a survey and analysis of publications through the descriptors selected in the Descriptors in Health Sciences (DeCS / <http://desc.bvs.br>: Prenatal; Pregnancy; Assistance; Prevention; and their respective translations into the Portuguese, with crossing performed at the Boolean operator "and"

3. Results and Discussion

A total of 24,436 prenatal consultations were recorded from 2019 to 2021 in the municipality of Recife (table 01).

Table 01 : Number of registered prenatal consultations

Municipality	Year	Quantity
Recife	2019	8.727
Recife	2020	8.508
Recife	2021	7.201
TOTAL		24.436

Source: SISAB/SUS

The year 2019 obtained the highest number of records of prenatal consultations held in the city of Recife with 35% (n=8,727) (Figure 01).

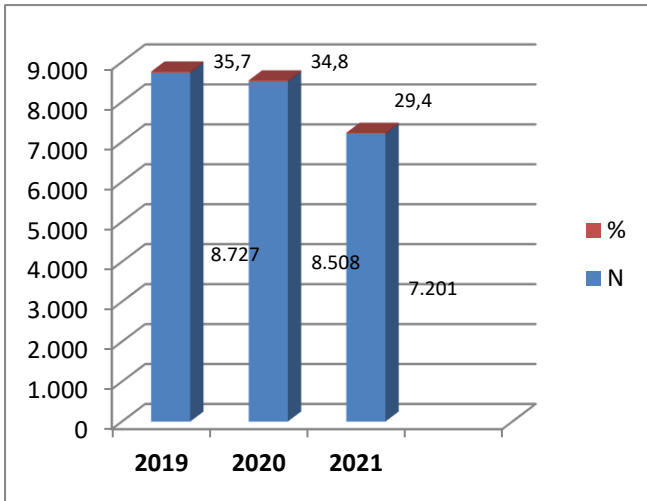


Figure 01 : Proportion of prenatal appointment records according to year.
Source: SISAB/SUS

Regarding the frequency of prenatal consultations performed, it was observed that 87% (n=21,437) of the records corresponded from 1 to 3 times (Figure 02).

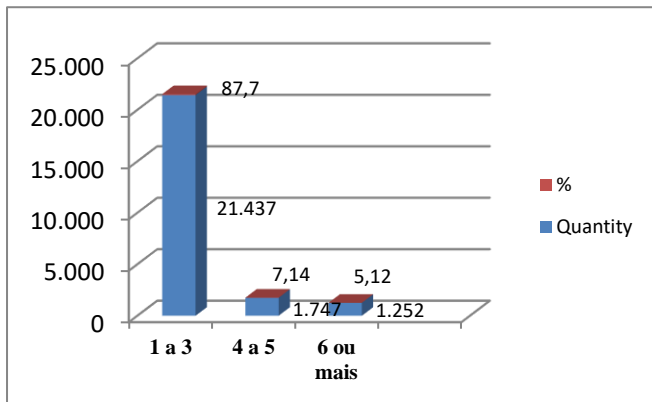


Figure 02 : Proportion of frequency of prenatal consultations performed.
Source: SISAB/SUS

It was possible to notice a considerable reduction in the number of prenatal consultations when compared to 2019 with 2021, reaching a total of 1,526 fewer consultations.

The pregnancy phase involves a complex, dynamic and multidimensional process for women and their families, in view of clinical, social, cultural and symbolic characteristics, characterizing a process of intense transformations, learning, expectations, anides and insecurities in the face of what will be experienced, in addition to the acquisition of new roles and responsibilities. The pregnancy-puerperal cycle, although expected to be a period of healthy experiences, can generate several health needs, whether physical, emotional, relational and social (SEHNEM *et al.*, 2020).

The Ministry of Health advises that the follow-up to

prenatal care of habitual risk be developed exclusively by the primary health care (PHC) team. PHC comprises a set of health actions developed by a multidisciplinary team in a defined territory and directed to individuals, families and collectivities. It includes actions to promote, prevent, protect, diagnose, treatment, rehabilitation, harm reduction, palliative care and health surveillance (Ordinance No. 2,436 of September 21, 2017).

In the scope of PHC, the pregnant woman needs to be linked to the health team that works in the area covered by her residence, it is worth mentioning that prenatal actions are the responsibility of all team members, and follow-up consultations are the responsibility of the nurse and physician (BRASIL, 2016).

Also, according to the study by Silva *et al* (2013) prenatal care aims to reduce maternal-fetal morbidity and mortality. Therefore, clinical and laboratory tests offered during prenatal consultations favor the identification of risk situations as well as early intervention, in addition to the assistance received at the time of delivery, an important determinant for morbidity and mortality during the neonatal period.

The present study showed that prenatal consultation is well accepted by pregnant women, this can be evidenced through the considerable amounts of consultations performed, however it was possible to notice that these rates were reduced.

Regarding the number of prenatal consultations performed during the pandemic, it was observed that there was a reduction when compared to the year before the pandemic. Another study identified that the number of primary health care professionals for prenatal care was lower in the pandemic period (RAIMUNDO, 2021).

The same study also identified that the frequency of consultations was reduced, considering that in 2019 7 or more prenatal consultations were recorded, these findings corroborate the findings of this study, which showed that the highest frequency index was 1-3 times (RAIMUNDO, 2021).

Similarly, the study by Gonçalves *et al* (2017) showed that before the pandemic the rates of prenatal consultations were higher, where most women had six or more prenatal consultations in addition to starting early follow-up.

This reduction in the number of consultations can be explained due to the need to reorganize care flows in the pandemic period, and it is necessary to redefine the roles of the different units and levels of care and create new points of access to the health system, especially remotely with the objective of avoiding the dissemination of SARS-CoV-2 in health units, it is fundamental to articulate all these actions (DAUMAS *et al.*, 2020).

In the case of the study of *deliverance et al* (2019) highlighted that the rate of prenatal coverage has been increasing, however, the quality of this care still leaves to be desired. It is important to highlight that in 2016 the World Health Organization (WHO) increased the number of consultations from four to eight, based on scientific evidence that related the increase in the number of meetings with lower probability of stillborn (CUNHA *et al.*, 2019).

At the most recent Brazil level, the most recent recommendation was in 2011, establishing at least seven prenatal consultations. Thus, the above-mentioned study identified that the prevalence of seven or more prenatal consultations has been increasing in the country over the years (CUNHA *et al.*, 2019).

It is noteworthy that prenatal care is characterized as an important component of women's health care in the pregnancy-puerperal period. Therefore, daily practices during this care are associated with better perinatal outcomes (VIELLAS *et al.*, 2014).

The Ministry of Health advises that prenatal care should occur through the incorporation of welcoming conducts; the development of educational and preventive actions, without unnecessary interventions; early detection of pathologies and gestational risk situations; establishing a bond between prenatal care and the place of delivery; and easy access to quality health services, from basic outpatient care to high-risk hospital care (VIELLAS *et al.*, 2014).

Also, according to the study by Viellas *et al.* (2014) prenatal consultations are performed mainly in primary care units. In this context, nurses play an important role in providing humanized care, considering that the pregnancy process and the postpartum period are surrounded by feelings of fear and insecurity.

For Livramento *et al.* (2019) prenatal care should take into account the reception and recognition of the needs of pregnant women, with the objective of establishing bonds and not only reducing the performance of consultations and request for tests, because quality prenatal care has a direct impact on health indicators, contributing to the reduction of maternal and perinatal morbidity and mortality rates.

In this context, we highlight that it is the nurse's responsibility to perform prenatal consultations for pregnant women classified as low risk or habitual risk, with the responsibility of ensuring quality and comprehensive care (LIVRAMENTO *et al.*, 2019).

It is important to highlight that the Ministry of Health advises that in the context of primary care, prenatal consultation needs to be interspersed between the nursing professional and the doctor (BRASIL, 2012).

Furthermore, it is the role of nursing to monitor high-risk prenatal care, when part of a multidisciplinary team, considering that this care is not only up to the physician and it is considered that prenatal care goes far beyond the performance of individual consultations (LIVRAMENTO *et al.*, 2019).

Moreover, we know that the institutionalization of the evaluation of prenatal care is an extremely important method in order to ensure the improvement of quality and consequently the reduction of maternal and infant morbidity and mortality (CUNHA *et al.*, 2019).

Thus, the decrease in maternal and child mortality rates is an ideal worldwide, considering that actions that ensure equitable public policies and the strengthening of regional networks of care focused on social inclusion and something required for decades by managers (BRASIL, 2018).

4. Conclusions

Through the present study, it was possible to verify the prenatal indices and indicators in the scope of primary care, and thus identify the importance of adequate prenatal care. The family health strategy is the gateway for women, in this sense, quality prenatal care is of paramount importance.

Thus, we conclude that the participation of a multidisciplinary team contributes to the constant improvement of care planning, involving the care of pregnant women in an integral way.

However, it is necessary to invest in qualification for the health team, in order to meet the woman in the pregnancy-puerperal cycle, as well as in equipment and exams necessary for qualified care.

The results of this research may contribute as an incentive to conduct new studies regarding the indexes in prenatal indicators in primary health care. However, the present study found some limitations, which implies the need to conduct new studies involving the theme, in order to gather more information aiming to bring knowledge to professionals who are involved in prenatal care, contributing to the improvement of the quality of prenatal care in Brazil.

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